

Linguistic Dominance, Use, and Proficiency as Factors in Heritage Language Sound Change

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Poster PDF available at: <http://www.pitt.edu/~hbt3/>



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1) Background: Van Coetsem (2000)

- Two basic mechanisms of contact-induced sound change based on **linguistic dominance**, which is “based on the greater proficiency that a speaker has in one language (L1) as compared to another (L2). L1 refers to the language in which the speaker is most proficient, although it is not necessarily his [sic] first acquired or native language” (2000: 66-67)
- RL Agentivity**: Change in the speaker’s more dominant language (primarily lexical)
- SL Agentivity**: Change in the speaker’s less dominant language (primarily structural, including phonological)
- Model based on the **Stability gradient** defined as: “differences in stability between language components/domains (or subcomponents/subdomains), such as the difference between lexicon (less stable) and grammar (more stable)” (2000:50).

2) The Problem

- Proficiency is not the same as dominance
 - Heritage speakers described as dominant in the societally-dominant language (often their L2 in terms of order of acquisition) but variable in terms of proficiency
 - Which of the following factors best predicts the individual speakers most likely to initiate contact-induced sound change involving vowels?
- Linguistic dominance (based on speaker preferences)
 - Language use contexts
 - Proficiency (self-reported and based on relative % of interview in each language)

3) Toronto Heritage Cantonese



Major waves of migration from Hong Kong to Toronto

- Loosening of immigration laws in the 1960s
- Fears of handover to Mainland Chinese government in 1997

Toronto now home to one of largest Cantonese speaking communities in North America

4) Data/ Methods

Data from:



Midpoint Lobanov normalized (Thomas & Kendall 2007) F1/F2 measurements taken from:

- Cantonese vowels produced during sociolinguistic Interviews (~ 1 hour long spontaneous speech samples following methods discussed in Labov 1984)
- Vowels produced during picture naming task

NOTE: Although Cantonese is primary language of interview, code-switching with English allowed.

Speakers:

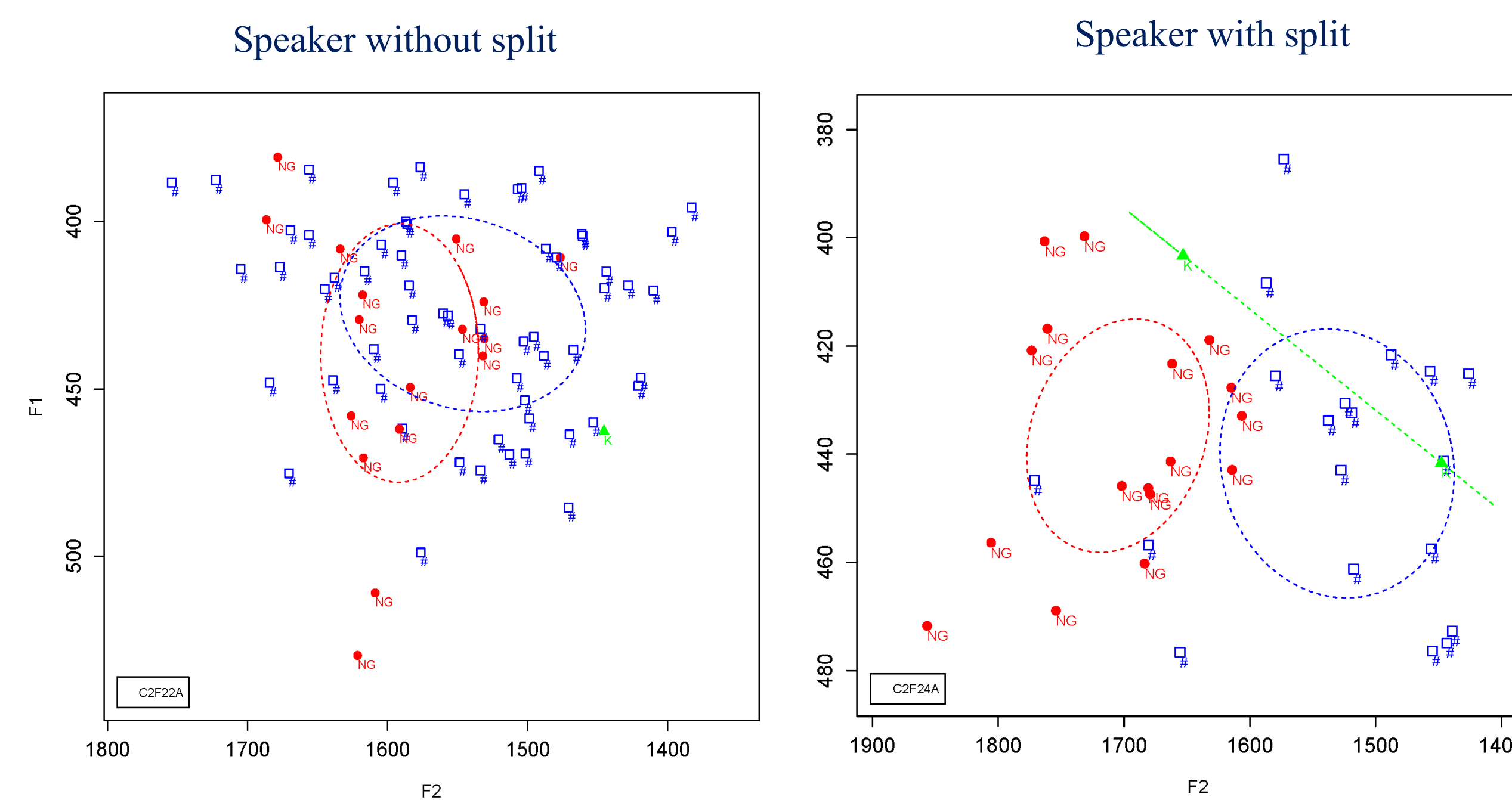
	GEN 1	GEN 2
Age Range	46-87	20-44
Time in Toronto	Moved to Toronto as adults, lived in Toronto > 20 years	Lifelong Toronto residents or have lived in Toronto since age of 4
Order of Acquisition	Cantonese then English	Cantonese then English
TOTAL	N = 12	N = 12

Ethnic Orientation Questionnaire (EOQ)

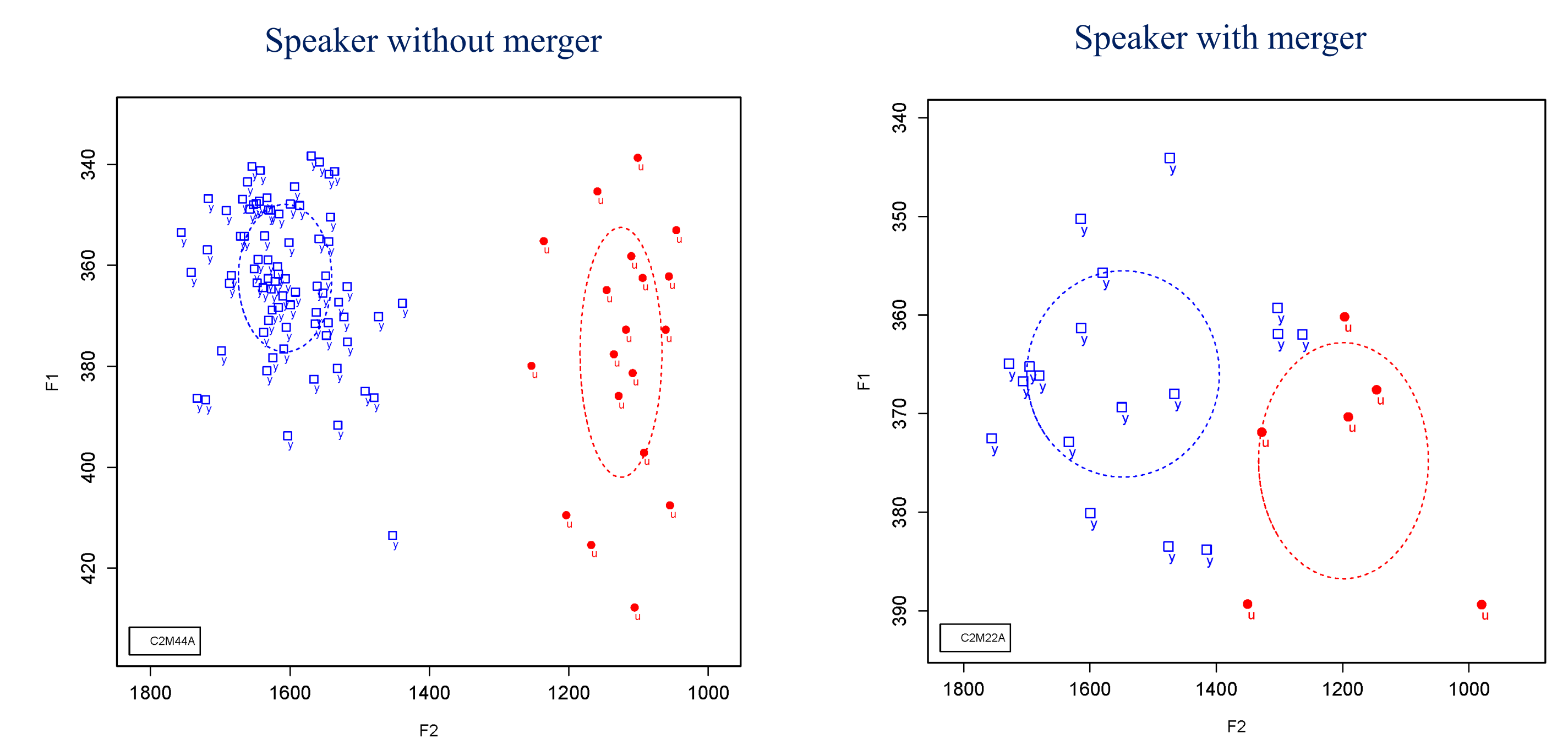
- Included questions about ethnic orientation, language use, self-reported proficiency
- Responses coded on 0-2 scale (0=more Canadian/English, 2=more Cantonese/Chinese)

5) Question: What factors best predict heritage language sound change?

Change 1: Pre-nasal split in /ɛ/ (cf. Tse 2019)



Change 2: /y/ retraction + /u/ fronting → /y~/u/ merger (cf. Tse 2018)



6a) Results: Dominance, Use, and Proficiency

- Mixed effects modeling (Johnson 2009) with each EOQ modeled as a fixed effect (in separate models) and with word and speaker modeled as random effects
- Each EOQ question relates to **language dominance**, **language use**, or **proficiency**
- Table below shows percentage of GEN 2 self-reported responses for each question
- Only GEN 2 responses considered in modeling

Questions	0 (English)	1 (Both)	2 (Cantonese)	/y/ retraction?	/u/ fronting?	/ɛ/ Split?
Spoken language preference?	92%	8%	0%	n.s.	n.s.	n.s.
Reading/writing language preference?	100%	0%	0%	N/A	N/A	N/A
Radio/TV language preference?	67%	33%	0%	n.s.	n.s.	n.s.
Language used with friends?	92%	0%	8%	n.s.	n.s.	n.s.
Language used with family?	17%	58%	25%	*	***	n.s.
Language used with parents?	0%	25%	75%	n.s.	n.s.	n.s.
How well do you speak Cantonese?	“not at all” (0%)	“a little bit” (75%)	“very well” (25%)	n.s.	n.s.	n.s.

6b) Results: Proficiency Based on % of Cantonese Used

CAN % Score = Total words transcribed in Cantonese ÷ Total words in both Cantonese and English

Best step-down model of /y/ (GEN 2 data only)		
Random: Speaker and Word		
Fixed: CAN % Score (p < 0.001)***		
	Coefficient (Hz)	Tokens
continuous	+1	187
		351
r ² [fixed] = 0.0946, r ² [random] = 0.3174		
r ² [total] = 0.412		

More retraction with lower CAN % Scores

Best step-down model of /u/ (GEN 2 data only)		
Random: Speaker and Word		
Fixed: CAN % Score (p < 0.05)*		
	Coefficient (Hz)	Tokens
continuous	+1	-204
		165
r ² [fixed] = 0.123, r ² [random] = 0.234		
r ² [total] = 0.357		

More fronting with lower CAN % Scores

Best step-down model of /ɛ/ (GEN 2 data from pre-nasal context only)		
Random: Speaker and Word		
Fixed: CAN % Score (p < 0.001)***		
	Coefficient (Hz)	Tokens
continuous	+1	-161
		258
r ² [fixed] = 0.122, r ² [random] = 0.373		
r ² [total] = 0.495		

More split with lower CAN % Scores

7) Summary

Linguistic Dominance

- GEN 2 speakers are overwhelmingly English-dominant and prefer spoken English across most contexts
- Language dominance (in terms of preferences) factors unsuccessful at predicting variation, possibly because of near universal English preference

Language Use

- “Language used with family” significant for /y/ retraction and /u/ fronting (and hence /y~/u/ merger), but not for the pre-nasal /ɛ/ split
- Language used with friends/parents not significant probably because of near universal

Proficiency

- Proficiency based on CAN % Score is only factor that consistently predicts each change
- Self-reported proficiency unsuccessful at accounting for variation

8) Conclusion

- Dominance and proficiency must be distinguished from each other (contra van Coetsem 2000).
- Dominance alone does not account for who innovates since GEN 2 speakers are almost universally English dominant. Speakers who show less English dominance are not significantly less conservative than others.
- Proficiency (in terms of CAN % Score) and language use more successful, but precise mechanisms worth further investigation.
- Higher CAN% Score means able to carry out spontaneous conversation while resorting to English less often, but says nothing about other proficiency factors such as vocabulary size, complex morpho-syntactic structures, etc

9) References

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